

**IN THE CLAIMS:**

Please cancel claims 1-13 without prejudice. Please add the following new claims. This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-13 (Canceled).

14. (New) A substantially purified polypeptide comprising SEQ ID NO:2.
15. (New) A substantially purified polypeptide consisting essentially of SEQ ID NO:2.
16. (New) A substantially purified polypeptide consisting of SEQ ID NO:2.
17. (New) A substantially purified polypeptide comprising a sequence that is at least 70% identical to a sequence consisting of SEQ ID NO:2 and wherein the polypeptide comprises activity of a D-aminoacylase that acts on N-acetyl-D-amino acids to produce the corresponding D-amino acids.
18. (New) The substantially purified polypeptide of claim 17, wherein the polypeptide is at least 80% identical to SEQ ID NO:2.
19. (New) The substantially purified polypeptide of claim 17, wherein the polypeptide is at least 90% identical to SEQ ID NO:2.

20. (New) The substantially purified polypeptide of claim 17, wherein the polypeptide is at least 95% identical to SEQ ID NO:2.
21. (New) A substantially purified polypeptide comprising a sequence as set forth in SEQ ID NO:2 and having from 0 to 50 amino acid substitutions, deletions, insertions and/or additions and wherein the polypeptide comprises activity of a D-aminoacylase that acts on N-acetyl-D-amino acids to produce the corresponding D-amino acids.
22. (New) The substantially purified polypeptide of claim 21, wherein the polypeptide has from 0 to 30 amino acid substitutions, deletions, insertions and/or additions.
23. (New) The substantially purified polypeptide of claim 21, wherein the polypeptide has from 0 to 10 amino acid substitutions, deletions, insertions and/or additions.
24. (New) The substantially purified polypeptide of claim 21, wherein the substitutions are conservative substitutions.
25. (New) A substantially purified polypeptide encoded by a nucleic acid comprising SEQ ID NO:1.